

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
22 December 2005 (22.12.2005)

PCT

(10) International Publication Number
WO 2005/121205 A3

(51) International Patent Classification⁷: C08G 63/688,
63/06, 63/91

(74) Agents: OKABE, Masao et al; No. 602, Fuji Bldg., 2-3,
Marunouchi 3-chome, Chiyoda-ku, Tokyo 1000005 (JP).

(21) International Application Number:
PCT/JP2005/0 10997

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG,
KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM,
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM,
SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
YU, ZA, ZM, ZW

(22) International Filing Date: 5 June 2005 (09.06.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004-174783 11 June 2004 (11.06.2004) JP
2005-168916 8 June 2005 (08.06.2005) JP

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicants (for all designated States except US): CANON
KABUSHIKI KAISHA [JP/JP]; 3-30-2, Shimomaruko,
Ohta-ku, Tokyo, 1468501 (JP). YANO, Tetsuya [JP/JP];
c/o CANON KABUSHIKI KAISHA, 3-30-2, Shimo-
maruko, Ohta-ku, Tokyo, 1468501 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KENMOKU,
Takashi [JP/JP]; c/o CANON KABUSHIKI KAISHA,
3-30-2, Shimomaruko, Ohta-ku, Tokyo, 1468501 (JP).
MIHARA, Chieko [JP/JP]; c/o CANON KABUSHIKI
KAISHA, 3-30-2, Shimomaruko, Ohta-ku, Tokyo,
1468501 (JP). FUKUI, Tatsuki [JP/JP]; c/o CANON
KABUSHIKI KAISHA, 3-30-2, Shimomaruko, Ohta-ku,
Tokyo, 1468501 (JP). KUSAKARI, Aiko [JP/JP]; c/o
CANON KABUSHIKI KAISHA, 3-30-2, Shimomaruko,
Ohta-ku, Tokyo, 1468501 (JP).

Published:

— with international search report
— before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
9 February 2006

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: POLYHYDROXYALKANOATE HAVING ESTER GROUP, CARBOXYL GROUP, AND SULFONIC GROUP, AND
METHOD OF PRODUCING THE SAME

(57) Abstract: A novel polyhydroxyalkanoate having a reactive functional group in a molecule and a method of producing the
same; and a novel polyhydroxyalkanoate having a new function obtained by chemically modifying the polyhydroxyalkanoate having
a reactive functional group and a method of producing the same. A polyhydroxyalkanoate containing units having a carboxyl group,
an amide group, and a sulfonic group in a molecule is induced.

WO 2005/121205 A3